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| 09/720,932 | 01/02/2001 | Brent Beamer | 011338-105 | 8310 |
| 24239 | 7590 | 01/02/2004 | EXAMINER | |
| MOORE & VAN ALLEN, PLLC 2200 W MAIN STREET SUITE 800 DURHAM, NC 27705 | | | KRUEER, KEVIN R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1773 | |

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,932

Applicant(s)

BEAMER, BRENT

Examiner

Kevin R Kruer

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-12 and 14-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12, 14-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

Note: with respect to claim 18, said thickness is understood to read on the thickness of the claimed metal foil, as supported on page 11, line 2 of the specification.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The rejection of claims 1-3, 5, 6, 8-10, 27, and 28 under 35 U.S.C. 103(a) as being unpatentable over Mott (US 4,756,414) in view of White (US 4,699,830) has been overcome by amendment.

3. The rejection of claim 7 under 35 U.S.C. 103(a) as being unpatentable over Mott (US 4,756,414) in view of White (US 4,699,830), as applied to claims 1-3, 5, 6, 8-10, 27, and 28, and further in view of Ohlbach (US 4,293,070) has been overcome by amendment.

4. The rejection of claim 11 under 35 U.S.C. 103(a) as being unpatentable over Mott (US 4,756,414) in view of White (US 4,699,830), as applied to claims 1-3, 5, 6, 8-10, 27, and 28, and further in view of Akao et al. (US 4,906,517) has been overcome by amendment.

5. The rejection of claims 1 and 23-27 under 35 U.S.C. 103(a) as being unpatentable over White (US 4,699,830) in view of Dahringer et al. (US 5,689,878) has been overcome by amendment.

Art Unit: 1773

6. The rejection of claims 1, 12-18, 22, 27, and 29, under 35 U.S.C. 103(a) as being unpatentable over Havens (US 5,180,615) in view of White (US 4,699,830) and Dahringer et al. (US 5,689,878) has been overcome by amendment.

7. The rejection of claim 19 under 35 U.S.C. 103(a) as being unpatentable over Havens (US 5,180,615) in view of White (US 4,699,830) and Dahringer et al. (US 5,689,878), as applied to claims 1, 14-18, 22, 27, and 29 above, and further in view of Rayford et al. (US 4,738,882) has been overcome by amendment.

8. The rejection of claims 20 and 21 under 35 U.S.C. 103(a) as being unpatentable over Havens (US 5,180,615) in view of White (US 4,699,830) and Dahringer et al. (US 5,689,878) and Rayford et al. (US 4,738,882), as applied to claims 1, 14-19, 22, 27, and 29 above, and further in view of Mott (US 4,756,414) has been overcome by amendment.

9. Claims 1-3, 5, 6, 8-10, 12, 14-18, and 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over White US 4,699,830 in view of Havens (US 5,175,033), as evidenced by Wang et al (US 4,104,516) and Golike et al (US 5,091,229).

White teaches a laminate material which can be used to form packages of electrically sensitive components. The laminate includes an antistatic layer (herein relied upon to read on the claimed "heat sealable static dissipative polymer") providing a surface resistivity of 10^8 to about 10^{13} ohms/sq. The antistatic layer may comprise any heat sealable material (col 2, line 40) and preferably comprises a polyolefin which has been bulk treated during their compounding step through the addition of an additive that minimizes charge generation (col 4, lines 2+). A first conductive metal layer (herein

Art Unit: 1773

relied upon to read on the claimed "metallized surface" of the first moisture barrier) is adhered to the antistatic layer and provides a surface resistivity of less than about 10^5 ohms/sq (col 4, lines 21+). An adhesive (herein relied upon to read on the claimed "first tie layer") bonds the metal layer to the antistatic layer (col 4, lines 52+). . A carrier film layer (herein relied upon to read on the claimed "nonmetallized surface" of the claimed "second polymeric moisture barrier") is adhered to the first conductive metal layer by any suitable means (col 4, line 28) such as adhesion or deposition (col 5, line 19).

When an adhesive is used, said adhesive layer reads on the claimed "second tie layer" of claims 1, 2, 12, and 23 and the claimed "third tie layer" of claim 15. A second conductive metal layer (herein relied upon to read on the claimed "metallized surface" of the claimed "second polymeric moisture barrier") is adhered, bonded, or deposited onto the carrier film layer using any conventional technique such as vacuum or sputter metallization (col 5, lines 19-21). When said second conductive metal layer is adhered to the carrier layer, the adhesive is understood to read on the claimed "second tie layer" of claim 14 and the claimed "third tie layer" of claim 23. Preferred metals include aluminum, nickel, cadmium, tin, chromium, lead, copper, zinc, and compounds and mixtures thereof (col 5, lines 44-49). A transparent protective layer (herein relied upon to read on the claimed "low charge retaining coating") is adhered to the second conductive metal layer to protect the metal layer from abrasion and oxidation. The surface resistivity of the combined clear protective layer and second conductive metal layer is between 10^4 - 10^8 ohms/square (abstract). The second conductive layer provides rapid static discharge capability to ground for effectively bleeding any charges

Art Unit: 1773

introduced to the surface of the structure. The second conductive layer also exhibits or enhances the effect of the Faraday cage of the overall structure of the package (col 5, lines 15-49).

White does not teach that the laminate should comprise a nonmetallized surface between the antistatic layer and the first conductive metal layer. However, Havens teaches a flexible sheet material for packaging electrostatically sensitive items. The sheet has a metal layer (herein understood to be analogous to the first conductive layer of White) sandwiched between antistatic layers (herein understood to be analogous to the static dissipative polymer and the low charge retaining coating, respectively, of White) (col 3, lines 6+). The laminate comprises a resistivity of no less than about 10^8 ohms/square (col 2, line 39). The laminate optionally has a polymeric insulative layer sandwiched between the metal layer and the antistatic layer (col 3, lines 1+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert a polymeric insulative layer between the first tie layer and the first conductive metal layer of White. The motivation for doing so would have been to control the film's static dissipative properties.

With respect to claims 7, 18, and 25, White does not teach the thickness of the conductive metal layers should have the claimed thickness. However, White does teach that the thickness of the metal will vary depending upon desired surface resistivity (col 4, line 40). Furthermore, it is known in the art that the laminate's transparency improves as the thickness of the metal layer decreases. White teaches that the layers are selected in order to allow light transmission (col 5, lines 50+). Thus, it would have

been obvious to one of ordinary skill in the art to vary the thickness of the metal layer taught in White in order to optimize the film's transparency and surface resistivity.

With respect to claims 12 and 14, the deposited first and second conductive layers taught in White are understood to read on the claimed metal foils. In support of this position, Applicant's attention is directed to US 4,104,516 (col 11, lines 1+), which teaches that transparent, deposited metallic layers are understood to read on metallic foils.

With respect to claims 26-29, White teaches that the thickness of the conductive metal layers should be varied. It is known in the art (see US 5,091,229, col 5, lines 4+) that the metal layers of White also provide the laminate with moisture resistance. The thicker and more continuous the deposited layer, the better the moisture barrier properties. Thus, by varying the thickness in order to obtain the desired surface resistivity, as motivated by White, one of ordinary skill in the art would necessarily obtain the claimed moisture barrier properties.

10. Claims 7 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over White (US 4,699,830) in view of Havens (US 5,175,033), as evidenced by Wang et al (US 4,104,516), as applied to claims 1-3, 5, 6, 8-10, 12, 14-18, and 22-30 above, and further in view of Akao et al. (US 4,906,517).

White in view of Havens is relied upon as above. Specifically, White teaches that the protective layer preferably is an acrylic-based coating that controls the resistivity of the outer surface of the package. White does not teach that the resistivity can be controlled by adding carbon to the protective layer. However, Akao teaches that carbon

Art Unit: 1773

may be added to the protective layer applied over the surface of a metallic film in order to improve a packaging laminate's ability to dissipate static electricity (col 9, lines 8+).

Thus, it would have been obvious to one of ordinary skill in the art to add carbon to the acrylic protective layer taught in White in order to obtain the desired resistivity for the outer surface of the package.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over White US 4,699,830) in view of Havens (US 5,175,033), as evidenced by Wang et al (US 4,104,516), as applied to claims 1-3, 5, 6, 8-10, 12, 14-18, and 22-30 above, and further in view of Rayford et al (US 4,738,882). White in view of Havens is relied upon as above, but does not teach that the insulating layer may comprise biaxially oriented nylon. However, Rayford teaches an antistatic laminated packaging material for the protection of electronic components from electrostatic charges (abstract). The laminate comprises a metal layer, a heat sealing layer, and an insulating layer. Rayford teaches that the insulating layer may comprise nylon (col 2, lines 48+) and should be biaxially oriented in order to produce a material of high tensile modulus (col 2, lines 62+). Since Rayford teaches that nylon was known to be functionally equivalent at the time the invention was made to the insulating layer taught by White in view of Havens, it would have been obvious to one of ordinary skill in the art to utilize nylon as the insulating layer taught by White in view of Havens.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to biaxially orient the insulating sheet of White in view of

Havens. The motivation for doing so would have been to improve the tensile modulus of the laminate.

12. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over White US 4,699,830) in view of Havens (US 5,175,033) and Rayford et al (US 4,738,882), as evidenced by Wang et al (US 4,104,516), as applied to claims 1-3, 5, 6, 8-10, 12, 14-19, and 22-30 above, and further in view of Mott (US 4,756,414). Havens in view of White and Rayford is relied upon as above, but does not teach that the carrier film may be polyethylene. However, Mott teaches a package used for forming packages or the like for containing electrostatically sensitive components and protecting them against electrostatic discharge. Mott teaches that the carrier film of a metallized layer may comprise polypropylene or polyethylene (col 4, lines 66+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize polyethylene as the carrier film taught in White because Mott teaches polyethylene is functionally equivalent to the carrier layers taught in White.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-12 and 14-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 703-305-0025. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

X-27-

KRK
December 29, 2003



Ramsey Zacharia
Primary Examiner
Tech Center 1700